

A NEW COMBINATION IN *MACHAERANTHERA CARNOSA* (ASTERACEAE:  
ASTEREAE)

Guy L. Nesom

Texas Regional Institute for Environmental Studies, Sam Houston State University,  
Huntsville, Texas 77341 U.S.A.

ABSTRACT

*Machaeranthera carnosus* comprises two allopatric varieties, following the study of Scott Sundberg. The typical variety is from Arizona and Sonora, México. The variety from California and Nevada is recognized as *M. carnosus* var. *intricata* (A. Gray) Nesom, *comb. nov.*

KEY WORDS: *Machaeranthera*, Astereae, Asteraceae, nomenclature

The generic status and infraspecific taxonomy of *Aster intricatus* (A. Gray) Blake (= *Leucosyris carnosus* [A. Gray] Greene) were studied by Sundberg (1986), who has provided details of morphology, geography, and nomenclature. He concluded that the single species should be maintained as the monotypic genus *Leucosyris* Greene but later decided that a position in the genus *Hazardia* Greene would be more appropriate. The transfer of *Aster intricatus* to *Machaeranthera* Nees (Nesom 1989) reflected yet another point of view.

Sundberg recognized two allopatric elements within the species: (a) a system of large-headed plants (var. *carnosus*) in four counties of southeastern Arizona, with an adjacent locality in Sonora, México, close to the international border; and (b) a system of small-headed plants (var. *intricata*) in eight counties of southern California and four of southern Nevada. He noted (p. 197) that var. *carnosus* is known only from a few collections and "may be threatened with extinction." Because of unsuccessful attempts to relocate plants at previous collection sites, he may have suspected that the entity already is extinct or nearly so.

In the transfer to *Machaeranthera*, I deferred to Sundberg for his choice of genera for the varietal combination. Since then, however, Cronquist (1994) maintained the species within *Leucosyris* and made the necessary varietal combination in that genus, reflecting his agreement with Sundberg's assessment of infraspecific variation and his initial choice of genera.

*Machaeranthera carnos* (A. Gray) Nesom has not been included in recent molecular studies of the tribe Astereae (Lane, *et al.* 1996) or the subtribe Machaerantherinae (Morgan & Simpson 1990) to provide a test of the competing morphological hypotheses of generic placement. The species has, however, been accepted within *Machaeranthera* by Hartman (1990) and in the treatment of that genus in California by Keil & Brown (1993). In Cronquist's treatment of the species (1994, p. 260, as *Leucosyris*), he made the following observation. "For the past century *Leucosyris* has usually been included in *Aster*, to which it bears no very close relationship. Possibly it is allied to *Haplopappus spinulosus*, which has very similar achenes and pappus." *Haplopappus spinulosus* (Pursh) DC. was treated by Turner & Hartman (1976) as a synonym of *Machaeranthera pinnatifida* Shinnery *sensu lato*.

Following preliminary agreement that the species is correctly placed in *Machaeranthera*, with its greatest similarity to members of *Machaeranthera* sect. *Arida* R.L. Hartman (Nesom 1989; Hartman 1990; Nesom, *et al.* 1990), its formal taxonomy is completed here with the varietal combination.

**MACHAERANTHERA CARNOSA** (A. Gray) Nesom var. *intricata* (A. Gray) Nesom, *comb. nov.* **BASIONYM:** *Bigelovia intricata* A. Gray, Proc. Amer. Acad. Arts 17:208. 1882. *Aster intricatus* (A. Gray) Blake, J. Wash. Acad. Sci. 27:378. 1937. *Leucosyris carnos* (A. Gray) Nesom var. *intricata* (A. Gray) Cronq., *Intern. Fl.* 5:260. 1994.

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